AMENDMENTS TO THE CLAIMS

WE CLAIMS (clean copy)

1. (Currently Amended) A method of avoiding an amplified spontaneous emission (ASE) loop in an optical network comprising a plurality of nodes coupled via optical paths, the nodes and optical paths forming a loop in the network, comprising the steps of:

dividing an optical spectrum of the optical network into at least two substantially non-overlapping spectral bands, which are respectively below and above a separation wavelength and have some non-substantial overlapping in the region of the separation wavelength; and

providing a plurality of optical seam filters, each optically interrupting optical signals in a respective spectral band, distributed among a plurality of nodes around the loop whereby optical signals in at least one spectral band are optically interrupted in one node and optical signals in at least one other spectral band are optically interrupted in a different node, the optical seam filters providing at least one optical interruption around the loop for each spectral band;

wherein said optical seam filters provide a substantial loss in the region of the separation wavelength, which is sufficient to avoid ASE loops at wavelengths around the separation wavelength.

2. (Original) A method as claimed in claim 1 and including the step of, for at least one node including an optical seam filter for a spectral band, add/drop multiplexing optical signals of the spectral band at the node.

3. (Currently amended) A method as claimed in claim 1 wherein the optical spectrum is divided into said spectral bands, each band including a plurality of optical wavelengths.

4. (Currently amended) A method as claimed in claim 1 wherein the optical spectrum is divided into said spectral bands, each band having interleaved optical wavelengths.

5. (Canceled)

6. (Canceled)

7. (Canceled)

8. (Canceled)

9. (Currently amended) An optical network comprising a plurality of nodes coupled via optical paths, the nodes and paths forming a loop in the network, wherein an optical spectrum for communications among the nodes via the optical paths is divided into at least two non-overlapping spectral bands, which are respectively below and above a separation wavelength and have some non-substantial overlapping in the region of the separation wavelength, and wherein a plurality of nodes in the loop each comprise at least one optical seam filter for optically interrupting the loop for optical signals in a respective one of the spectral bands, all of the spectral bands of the optical spectrum thereby being optically interrupted by respective optical seam filters distributed among at least two nodes in the loop, wherein said optical seam filters provide a substantial loss in the region of the separation wavelength, which is sufficient to avoid ASE loops at wavelengths around the separation wavelength.

10. (Original) An optical network as claimed in claim 9 wherein at least one of the plurality of nodes in the loop comprising an optical seam filter further comprises an optical add/drop multiplexer for add/drop multiplexing optical signals of the respective spectral band at the node.

11. (Currently amended) An optical network as claimed in claim 9 wherein the optical spectrum is divided into said spectral bands, each band including a plurality of optical wavelengths.

12. (Currently amended) An optical network as claimed in claim 9 wherein the optical spectrum is divided into said spectral bands, each band having interleaved optical wavelengths.

13. (Canceled)

14. (Canceled)

15. (Canceled)

16. (Canceled)

17. (Canceled)

18. (Canceled)

19. (Canceled)

20. (Canceled)